PRACTICAL SYLLABUS

HISTOLOGY- Involves the study of the microscope structure of the cells, tissue and organs.

MICROSCOPY- It is important for the students to understand the applications and limitations of the various types of microscopes and the preparations of the tissues and stains. Several types of microscopes are available for the study of biological materials.

* EPITHELIAL TISSUE

1. Simple Epithelium

Simple Squamous Epith.

Simple Cuboidal Epith.

Simple Columnar Epith./ Simple Columnar Ciliated Epith.

Pseudostratified Columnar Epith./ Pseudostratified Columnar Ciliated Epith

1. Stratified Epithelium

Stratified Squamous Epith./Stratified Squamous keratinized Epith.

Stratified cuboidalEpith.

Stratified Columnar Epith./Stratified Columnar Ciliated Epith.

Transitional Epth.

1. Glandular Epithelium

Exocrine glands

Endocrine glands

* CONNECTIVE TISSUE

Areolar C.T Mucoid C.T

Adipose C.T Reticular C.t

White Collagenous C.T Yellow elastic C.T

* CARTILAGE

Hyaline Cartilage

Elastic Cartilage

White Fibro Cartilage

* BONE

Compact Bone

Spongy Bone

* MUSCULAR TISSUE

Smooth Muscle

Skeletal Muscle

Cardiac Muscle

* NERVOUS TISSUE

Nerve cells

Peripheral Nerve (nerve trunk)

* BLOOD VASCULAR SYSTEM

Artery & Vein

Aorta

* LYMPHATIC SYSTEM

Lymph Nodes

Spleen

Tonsils

Thymus

* RESPIRATORY SYSTEM

Trachea

Lungs

* DIGESTIVE SYSTEM

Lips

Salivary Glands: Submandibular Gland, Sublingual Gland.

Digestive tube: Oesophagus, Gastro-oesophagus junction.

Stomach: Cardiac Region, Fundus Region, Pyloric Region.

Small Intestine: Duodenum, Jejunum, Ilium.

Large Intestine: Caecum, Appendix, Ascending and transverse and Descending Colon, Rectum.

Liver

Pancreas

* URINARY SYSTEM:

Kidney

UreterBladder

LAB PREPARATION

* Magnification used to examine slides: 10X and 40X.
* After each lab, the students should submit the sketchbook with drawings of what they have seen under the microscope in the previous lab.

**PACTICAL 1:**

INTRODUCTION

* Demonstration of :

1. Light microscopes.
2. Electron microscopes.

* Introduction to different cell parts.

**PACTICAL 2:**

EPITHELIAL TISSUE

1. Simple Squamous Epith.
2. Simple Cuboidal Epith.
3. Simple Columnar Epith.
4. Pseudostratified Columnar Ciliated Epith.
5. Stratified Squamous Epith.
6. Stratified Squamous keratinized Epith.
7. Transitional Epith.

**PACTICAL 3:**

CONNECTIVE TISSUE

1. Areolar C.T.
2. Mucoid C.T.
3. Adipose C.T.
4. Reticular C.T.
5. White Collagenous C.T (regular/irregular).
6. Yellow elastic C.T.

**PACTICAL 4:**

CARTILAGE

1. Hyaline Cartilage.
2. Elastic Cartilage.

**PACTICAL 5:**

BONE

1. Compact Bone.
2. Spongy Bone.

**PACTICAL 6:**

MUSCULAR TISSUE + **QUIZ REVISION**\*

1. Smooth Muscle.
2. Skeletal Muscle.
3. Cardiac Muscle.

**PACTICAL 7:**

NERVOUS TISSUE + **QUIZ\***

1. Nerve cells.
2. Peripheral Nerve (nerve trunk).

**PACTICAL 8:**

BLOOD VASCULAR SYSTEM

1. Artery & Vein.
2. Aorta.

**PACTICAL 9:**

LYMPHATIC SYSTEM

1. Lymph Nodes.
2. Spleen.
3. Tonsils.
4. Thymus.

**PACTICAL 10:**

RESPIRATORY SYSTEM

1. Trachea.
2. Lungs.

**PACTICAL 11:**

1ST HALF OF THE DIJESCTIVE SYSTEMDIGESTIVE SYSTEM

1. Lips.
2. Salivary Glands: Submandibular Gland, Sublingual Gland.
3. Digestive tube: Oesophagus, Gastro-oesophagus junction.
4. Stomach: Cardiac Region, Fundus Region, Pyloric Region.
5. Small Intestine: Duodenum, Ilium.

**PACTICAL 12:**

2ND HALF OF THE DIJESCTIVE SYSTEMDIGESTIVE SYSTEM

1. Large Intestine: Appendix, Colon.
2. Liver.
3. Pancreas.

**PACTICAL 13:**

URINARY SYSTEM

1. Kidney.
2. Ureter.
3. Bladder.

**REVISION**

**PACTICAL 14:**

FINAL PRACTICAL EXAM

* **Revision:** Allow the students to review their information by showing them all the previously mentioned microscope slides covering all the topics.
* **Quiz and final exam:**

Spot examination:

* Slide identification.
* Side question.